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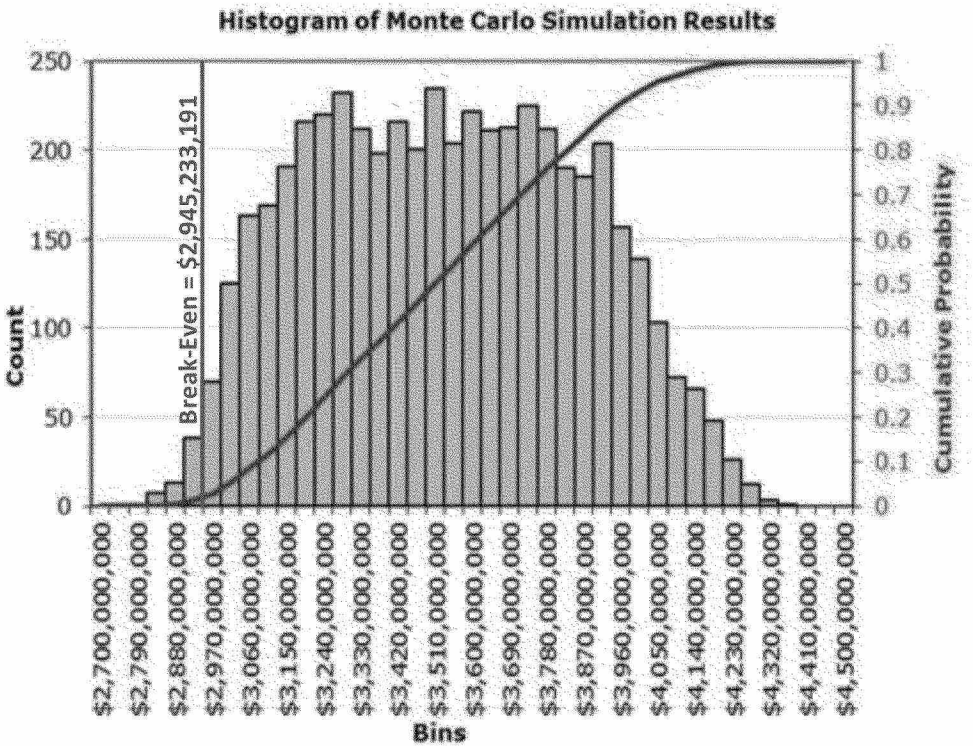
Analysis Output – Target Cost

Summary Statistics			
Sample Size (*N*):	5,000		
Central Tendancy (Location)			
Mean:	$3,514,612,385	Median:	$3,508,216,884
StErr:	$4,578,241		
Spread			
StDev:	$323,730,512		
Max:	$4,340,783,689	Q(.75):	$3,770,972,366
Min:	$2,757,025,739	Q(.25):	$3,247,389,553
Range:	$1,583,757,950	IQ Range:	$523,582,813
Shape			
Skewness:	0.086019528		
Kurtosis:	-0.925114412		
Quantiles, Percentiles, Intervals			
	90% Interval		95% Interval
Q(.05):	$3,013,896,777	Q(.025):	$2,969,141,048
Q(.95):	$4,040,623,970	Q(.975):	$4,116,779,991
Alpha (a):	0.10	Q(a/2):	$3,013,896,777
% Interval:	90%	Q(1-a/2):	$4,040,623,970
Probabilities			
Pr(y <	$2,945,233,191) =		1.80%
Pr(y >	$3,945,233,191) =		10.34%
Pr(2945233191 < y < 3945233191) =			87.86%
Alpha (a):			0.1214



Only 1.80% of iterations result in a Target Cost < Break-Even Cost

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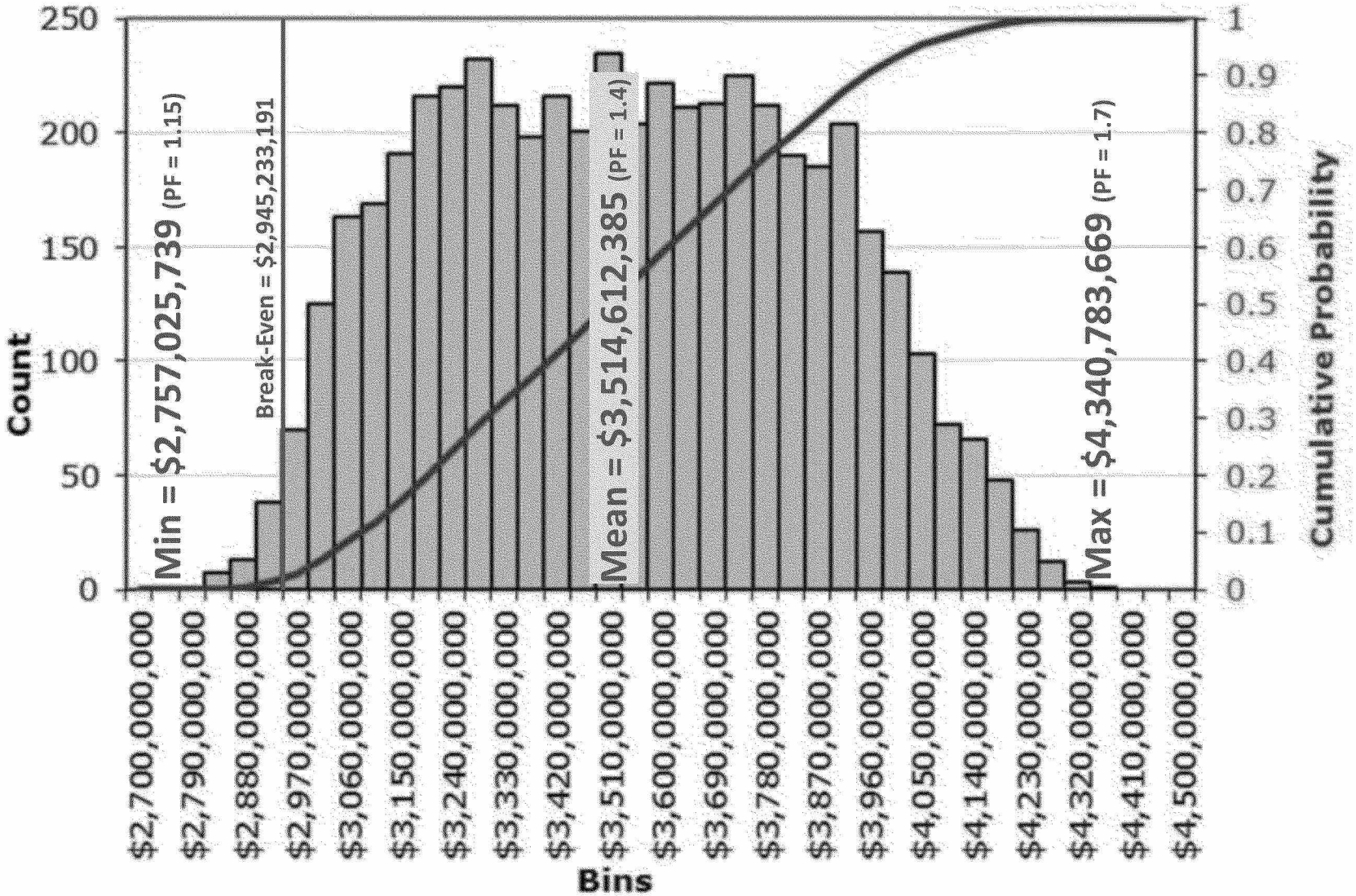
Analysis Output – Target Cost



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SCE&G Analysis for Filing

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SCE&G Analysis

santee cooper

Input Values (input)

	Nominal	Minimum	Maximum	Stochastic	Min Δ	Max Δ
To Go Direct Craft MH (TGDC)	12,877,283	12,877,283	12,877,283	12,877,283	0%	0%
Direct Craft Productivity Factor (DCPF)	1.15	1.15	1.72	1.35	0%	50%
Direct Craft Hourly Wage Rate (DCWR)	$35.00	$33.25	$38.50	$36.75	-5%	10%
Indirect:Direct Craft Ratio (IDCR)	0.66					10%
Indirect Craft Hourly Wage Rate (ICWR)	$31.					10%
Pctg Craft on Perdiem (PCP)	65.0%					5%
Craft Perdiem Hourly Rate (CPHR)	$5.83					0%
Tools/Consumables/PPE Markup (TCPM)	7.00%	7.00%	7.00%	7.00%	0%	0%
Fluor Markup to WEC (FMW)	4.0%	4.0%	5.0%	4.8%	0%	25%
WECTEC Markup to Owner (WMO)	3.09%	3.09%	3.09%	3.09%	0%	0%
WECTEC Field Non-Manual Labor Pctg (WFLP)	50%	50%	50%	0.50	0%	0%
Fluor Field Non-Manual Labor Pctg (FFLP)	50%	50%	50%	0.50	0%	0%
Field Non-Manual:Direct Craft Ratio (FDCR)	0.74	0.67	0.81	0.73	-10%	10%
Field Non-Manual Hourly Wage Rate (FWR)	$46.50	$44.18	$51.15	$49.30	-5%	10%
WECTEC Field Non-Manual Markup (WFM)	1.70	1.70	1.70	1.70	0%	0%
Fluor Field Non-Manual Markup (FFM)	1.50	1.50	1.50	1.50	0%	0%
Field Non-Manual PPE Markup (FPM)	1.0%	1.0%	1.0%	1.0%	0%	0%
Months Remaining in Project (MRP)	51	51	54	51	0%	6%
Non-Permanent Plant Materials Cost/Mon (NPMC)	$2,500,000	$1,875,000	$3,125,000	$3,051,869	-25%	25%
Direct Subcontracts Cost (DS)	$446,250,000	$423,937,500	$490,875,000	$457,614,657	-5%	10%
Indirect Subcontracts (IS)	$72,500,000	$68,875,000	$79,750,000	$78,927,442	-5%	10%
Subcontract Growth (SG)	10.0%	10.0%	10.0%	10.0%	0%	0%
WEC Remaining Subcontracts (WRS)	$147,689,674	$140,305,190	$155,074,158	$142,432,920	-5%	5%
Profit Already Paid (PAP)	$52,590,000	$52,590,000	$52,590,000	$52,590,000	0%	0%
Profit Limit (PL)	$25,059,853	$25,059,853	$25,059,853	$25,059,853	0%	0%

DCPF: [1.00, 1.15, 1.25, 1.50, 1.75, 2.00]
DCWR: [-5.0%, 0.0%, +5.0%, +10.0%]

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SCE&G Analysis

- Labor cost primary driver
- Cost dependent on two main factors
  - Direct Craft Labor Productivity Factor
  - Labor Wage Rate
- 24-scenario sensitivity analysis performed

Productivity Factor	Labor Escalation Rate -5.0%	0.0%	5.0%	10.0%
1.00	-5.7%	-4.3%	-2.9%	-1.6%
1.15	-1.5%	0.0%	1.6%	3.2%
1.25	1.2%	2.9%	4.7%	6.4%
1.50	8.1%	10.2%	12.3%	14.3%
1.75	15.0%	17.4%	19.8%	22.2%
2.00	21.9%	24.7%	27.4%	30.2%

= Most Likely Scenarios (Savings to customers range from 10.2% to 19.8%)

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An Independent Review & Risk Assessment of the VC Summer Units 2 & 3 – Fixed Price Option

Prepared by:

Dr. Howard Axelrod

Energy Strategies, Inc.

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Study Scope

- Review both SCE&G and Santee Cooper's economic analysis of the Fixed Price Option
- Applying assumptions used by Marion Cherry, use the @Risk Monte Carlo model to validate the Santee Cooper risk analysis
- Identify key drivers affecting the economic analysis of the fixed price option and perform an assessment of future trends including range of uncertainty
- Expand the Santee Cooper risk model to an annual assessment for years 2016 – 2020
- Develop probability distributions for key drivers using @Risk
- Perform independent risk analysis and assess findings

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About Howard Axelrod

- President of Energy Strategies, Inc. for 21 years
- Over 30 years in management consulting specializing in energy planning, risk management and business analysis
- 14 years in regulation - NYPSC
- BSEE & MSEE in Power Systems: Northeastern University
- MBA: State University of New York
- PhD in Managerial Economics: Rensselaer Polytechnic Institute
- Professional Engineer
- Life Member: IEEE

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Municipal electric clients have included:

- Santee Cooper
- MMWEC (Chief Risk Officer)
- CMEEC
- NYPA
- Old Dominion
- Alabama Municipal Power
- The Energy Authority
- NPPD
- OPPD
- AMP
- Roseville
- Glendale
- VI Water & Power Authority
- Traverse City

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I first tested the approach used by Santee against the @Risk model using similar assumptions. In general, the results were very close.

Parameter	Santee Cooper Analysis	ESI Analysis – Same Assumptions w/ @Risk Monte Carlo Model
Mean Value	$3.51B	$3.35B
Range (90% Confidence)	$3.01 - $4.04B	$3.07 - $3.81B
% of Iterations less than Break-even Target Cost	1.8%	1.2%

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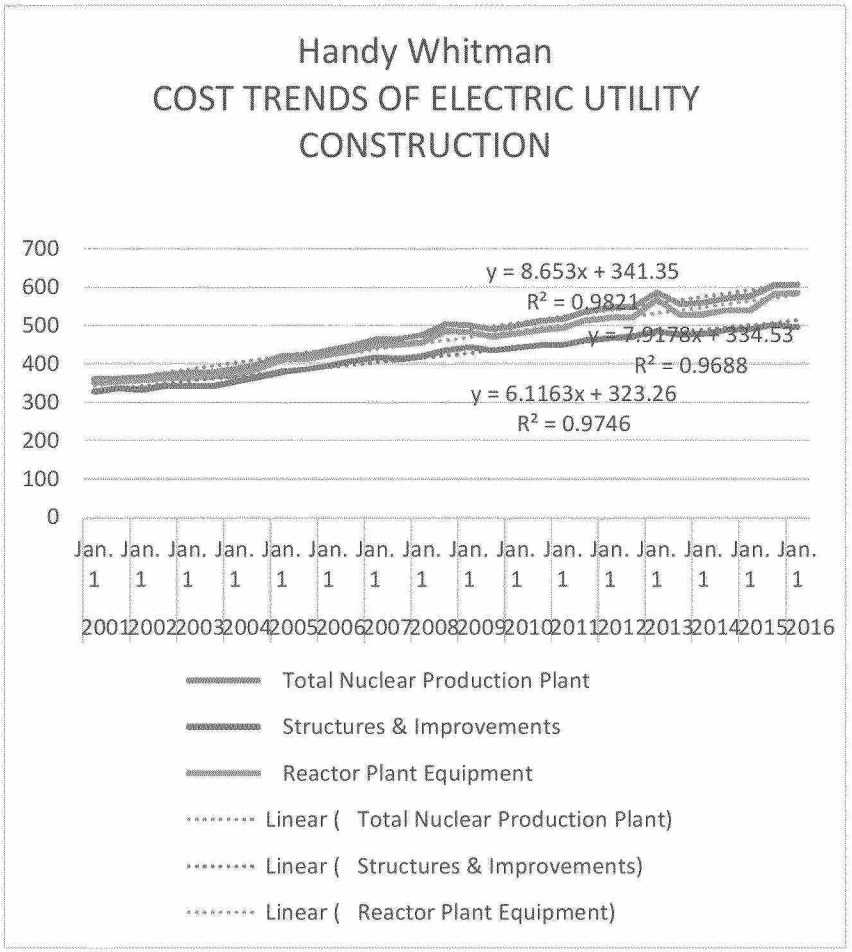
Although there is very scant data as to comparable costs and performance measures for nuclear construction, the following resources were used to develop the forecasted probability distributions.

- Analyzed Handy Whitman nuclear construction indices for the Southeast
- Analyzed DOE EIA Long Term Outlook assumptions for nuclear capital costs
- Analyzed NEI reports on current nuclear cost trends
- Analyzed BEA forecasts for labor costs and escalation rates



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Comparison of Santee Cooper assumptions and those used by Energy Strategies

Input Values (input)

			2016		2017		2018		2019		2020	
	Min Δ	Max Δ	Min Δ	Max Δ	Min Δ	Max Δ	Min Δ	Max Δ	Min Δ	Max Δ	Min Δ	Max Δ
To Go Direct Craft MH (TGDC)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Direct Craft Productivity Factor (DCPF)	0%	50%	0%	25%	0%	35%	0%	50%	0%	60%	0%	70%
Direct Craft Hourly Wage Rate (DCWR)	-5%	10%	0%	2%	0%	2%	0%	3%	0%	3%	0%	3%
Indirect:Direct Craft Ratio (IDCR)	-10%	10%	-10%	10%	-10%	10%	-10%	10%	-10%	10%	-10%	10%
Indirect Craft Hourly Wage Rate (ICWR)	-5%	10%	0%	2%	0%	2%	0%	3%	0%	3%	0%	3%
Pctg Craft on Perdiem (PCP)	-5%	5%	-5%	5%	-5%	5%	-5%	5%	-5%	5%	-5%	5%
Craft Perdiem Hourly Rate (CPHR)	-5%	10%	0%	2%	0%	2%	0%	3%	0%	3%	0%	3%
Tools/Consumables/PPE Markup (TCPM)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Fluor Markup to WEC (FMW)	0%	25%	0%	25%	0%	25%	0%	25%	0%	25%	0%	25%
WECTEC Markup to Owner (WMO)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
WECTEC Field Non-Manual Labor Pctg (WFLP)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Fluor Field Non-Manual Labor Pctg (FFLP)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Field Non-Manual:Direct Craft Ratio (FDCR)	-10%	10%	-10%	10%	-10%	10%	-10%	10%	-10%	10%	-10%	10%
Field Non-Manual Hourly Wage Rate (FWR)	-5%	10%	0%	2%	0%	2%	0%	3%	0%	3%	0%	3%
WECTEC Field Non-Manual Markup (WFM)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Fluor Field Non-Manual Markup (FFM)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Field Non-Manual PPE Markup (FPM)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Months Remaining in Project (MRP)	0%	6%	0%	6%	0%	6%	0%	6%	0%	6%	0%	30%
Non-Permanent Plant Materials Cost/Mon (NPMC)	-25%	25%	-25%	25%	-25%	25%	-25%	25%	-25%	25%	-25%	25%
Direct Subcontracts Cost (DS)	-5%	10%	-5%	10%	-5%	10%	-5%	10%	-5%	10%	-5%	10%
Indirect Subcontracts (IS)	-5%	10%	-5%	10%	-5%	10%	-5%	10%	-5%	10%	-5%	10%
Subcontract Growth (SG)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
WEC Remaining Subcontracts (WRS)	-5%	5%	-5%	5%	-5%	5%	-5%	5%	-5%	5%	-5%	5%
Profit Already Paid (PAP)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Profit Limit (PL)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

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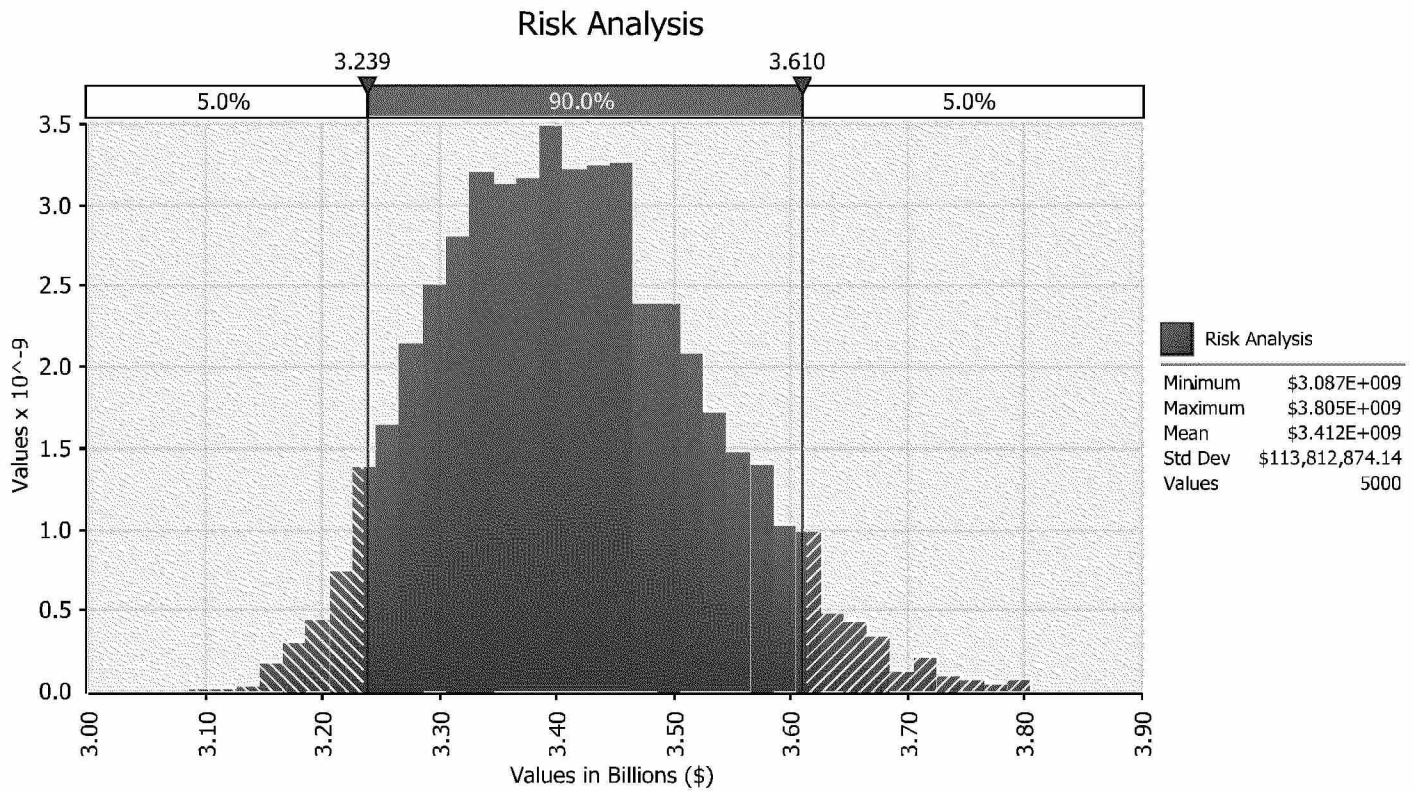
The Energy Strategies risk analysis found that the range of remaining costs fell between $3.239 and $3.61 Billion within a 90% confidence band. Mean price is $3.41 Billion



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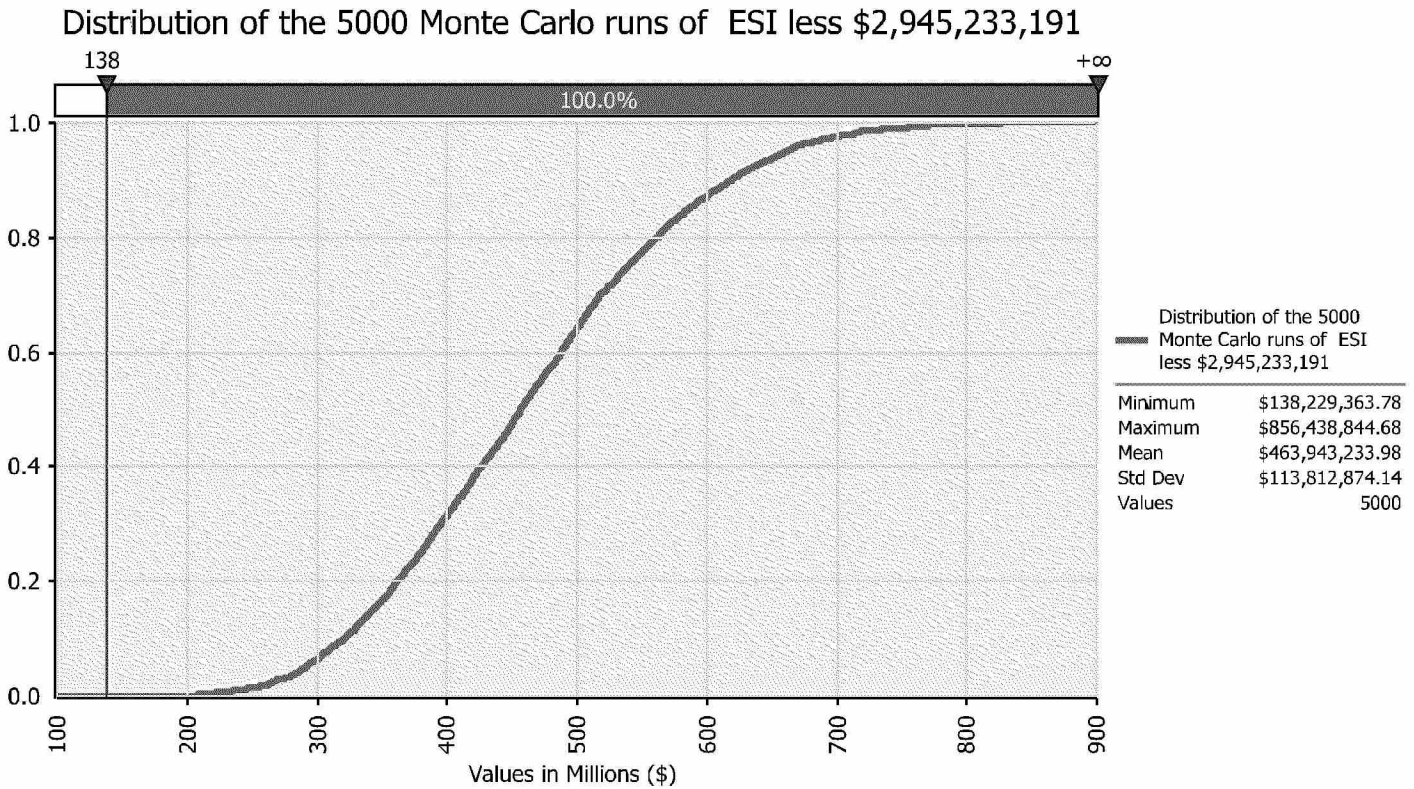
In summary, this graph depicts the cumulative percentage of time that the calculated price minus the fixed price was less than $0. This analysis projects that under no condition as modeled by the range of projections we found reasonable, did the calculated cost fall below the Fixed Price. In fact, we found that the calculated price never fell below $138 million more than the Fixed Price.



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Conclusions

- The Target Cost of $2,945,233,191 appears to be a bare minimum as in all but a few instances the actual costs to complete the projects can range up to $3.8 Billion using the Energy Strategies assumptions and up to $4.3 Billion with Santee Cooper assumptions.
- The Target Cost never exceeds the Energy Strategies' forecast, and only 1.8% of the time under Santee Cooper Assumptions
- At a mean value of $3.43 Billion, the owners can save, on average, $464 million and up to another $200 million within the 90% confidence band.

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Energy Strategies, Inc.
1759 Stephanie Trail
Atlanta, GA 30319
(518) 369-9969

June 14, 2016

Mr. Lonnie Carter
President and CEO
Santee Cooper
Riverwood Drive
Moncks Corner, SC 29461

Dear Lonnie:

Energy Strategies, Inc. was retained by Santee Cooper to perform an independent assessment of Westinghouse's Fixed Price Offer for the V. C. Summer 2 & 3 Nuclear Station construction project. I personally performed this analysis which included the following tasks:

- A review of both Santee Cooper's and SCE&G's fixed cost option analyses
- An assessment of historical and projected trends in nuclear labor and productivity rates
- A stochastic analysis of the Fixed Cost Option employing the @Risk Monte Carlo model.

Based upon this independent analysis, I found that the two assessments performed by Santee Cooper and SCE&G, respectively, produced results that were highly consistent with my own findings. I also found that the cost to complete the V.C. Summer generating units exceeded in all measured instances, the breakeven target cost of $2,945,233,191 associated with the fixed cost option of $6,082,000,000 offered by Westinghouse Corporation. From a stochastic perspective, after running 5,000 Monte Carlo iterations, all 5,000 samples or 100% of the iterations performed, produced a cost greater than the Fixed Cost Option.

Based on this independent analysis, it is recommended that the Fixed Cost Option be adopted by Santee Cooper.

Best regards,

Howard J. Axelrod, PhD
President

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Howard J. Axelrod, PhD

Areas of Specialization

Enterprise risk management, risk and uncertainty analysis, strategic planning, executive management consulting, regulatory economics, energy planning and forecasting, prudence review, management audits and assessment, wholesale market practices and procedures, energy trading and power contract management, counterparty credit risk assessment, merger and acquisition analysis, emerging energy technology market valuation and outage preparation and storm restoration best practice assessment.

Dr. Howard J. Axelrod has more than 40 years of experience with regulated electric and natural gas utilities. Having served as a special assistant to nationally renowned regulatory leader, NYSPSC Chairman Alfred Kahn, Dr. Axelrod led in the early development of performance based rates and nuclear phase-in mechanisms. He has performed numerous studies and also led in the development of strategies addressing such issues as competitive restructuring, strategic business and market planning, organizational development, and business risk analysis. Dr. Axelrod has performed best practice assessments relating to strategic and business planning, utility outage preparedness and enterprise risk management. Dr. Axelrod has testified before numerous state regulatory agencies and FERC on such topics as resource planning, power contract management, utility operations and management and productivity.

As Director of Utility Intervention for the New York Consumer Protection Board, Dr. Axelrod managed the nation's largest consumer advocacy organization overseeing the intervention on behalf of residential rate payers in over 300 electric, natural gas, water and telephone rate proceedings.

Dr. Axelrod has also been actively involved in the development and continuous improvement of competitive wholesale electric markets. He has been retained by the New York Independent System Operator and has participated in market development activities at the ISO-NE, PJM, MISO and CAISO.

Dr. Axelrod had served as the Executive Director of CCAS (Coalition for the Commercial Application of Superconductors) a technology-based trade organization and is currently the Acting Chief Risk Officer for a northeast municipal joint action agency.

Dr. Axelrod was Professor of Economics (Adjunct) at Rensselaer Polytechnic Institute (1980 - 1982) and Russell Sage College (1982 -1983). He was also a guest lecturer at Colgate University on Energy and the Environment (1998) and Georgia Institute of Technology (2011 - 2013). He is also a Life Member of the Institute of Electrical and Electronic Engineers, a Senior Member of the Power Engineering Society, and a Professional Engineer (NYS licensed retired.)

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Relevant Experience

Strategic Planning

Dr. Axelrod has performed a range *of strategic planning engagements to over twenty major municipal and investor owned electric utilities. He has led and facilitated five strategic plans for such clients as The Energy Authority, the New York Power Authority, Omaha Public Power District, American Transmission Company and Detroit Edison (DTE). Other strategic advisory clients have included Southern Company, Georgia Power, Oglethorpe Power, PSE&G, the Edison Electric Institute, Western Resources, and the NYISO. As a best practice, he has also introduced risk management techniques and tools to evaluate business uncertainty, as well as future opportunities and threats. Ten utilities have subscribed to Energy Strategy, Inc.'s Risk Management Training seminars for which over 150 utility planners have participated.*

Energy Strategy Inc.'s Strategic Planning & Risk Management Experience

Public Power	Client	Strategic Planning	Integrated Resource Planning	Risk Management & ERM	Risk Training
✓	CMEEC	X,F		X	X
✓	MMWEC	X		X	X
✓	AMERICAN MUNICIPAL POWER	X		X	
✓	OPPD	X,F			X
✓	NPPD	X		X	X
✓	NYPA	X,F		X	X
✓	THE ENERGY AUTHORITY	X,F			
✓	SANTEE COOPER	X	X	X	X
✓	VIWAPA	X	X		
	OGLETHORPE POWER	X	X		
	DTE	X,F		X	X
	WESTERN RESOURCES	X	X		
	NYSEG	X	X		
	PSEG	X	X	X	X
	GEORGIA POWER	X	X		
	SOUTHERN COMPANY	X		X	X
	UNITED ILLUMINATING	X			
	AMERICAN TRANSMISSION COMPANY	X,F			
	PENN ENERGY ASSOCIATION	X			
	EEI	X			
	USOURCE	X			
	BELL SOUTH	X			
	AMERITECH	X			
	NYISO	X		X	

F = STRATEGIC PLANNING FACILITATOR

System and Resource Planning

Dr. Axelrod is a trained power system plannerwith Bachelor's and Master's degrees in Electrical Engineering – Power Systems and the completion of General Electric's three year Application Engineering training program. While GE's training program included a range of disciplines including transmission and distribution analysis, Dr. Axelrod's focus was on generation planning and the influence of load growth on reserve margins and the sizing and timing of base load generation. His doctoral thesis received from Rensselaer Polytechnic Institute dealt wth decisions models relating to optimized generation expansion planning.

The following is a list of representative system planning assignments.

For PSEG, performed a range of system planning studies including such topical issues as:

- The conversion of coal fired generation to natural gas as a means to capture CO_2 emissions credits pursuant to emerging Kyoto Accord opportunities
- The economic benefit and impact of the acquisition of Niagara Mohawk's Albany Steam Plant leading to the development of the Bethlehem CCGT Plant.

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For the New Hampshire Public Service Commission, performed an independent system planning assessment using a comprehensive risk model to assess the conversion of a PSNH coal plant to wood chips.

For Santee Cooper Power, one of the Nation's largest municipal electric systems performed an independent risk assessment of its long range generation plan including a mix of coal, nuclear and CCGT base load generation. Dr. Axelrod has developed a proprietary planning model that evaluated the relative risk of a range of base load generation technologies including new nuclear, nuclear life extension, conventional and clean coal, combined cycle generation and a range of renewable technologies.

For Unitil, developed a comprehensive planning tool to evaluate the relative economics of distributed energy resource applications as a potential offset to distribution and transmission investments. Such DER applications might include solar electric installations at the customer site to reduce peak demand and associated capital requirements at stressed distribution networks.

Wholesale Market Issues

Dr. Axelrod has been actively involved in the development of competitive wholesale markets since its inception in the late 1990's. He has supported the formation of efficient and effective markets in New York, New England, and PJM. Dr. Axelrod's clientele have included a broad range of market participants including regulators, trade organizations, large energy users, independent power producers and wholesale traders and risk managers.

As leading energy economists, Dr Axelrod was invited in 2006 to join a small group of noted economists including the late Dr. Alfred Kahn and Nobel Laureate Vernon Smith to jointly prepare an open letter to regulators and other policy makers to refrain from abandoning the development of competitive wholesale markets because of the well publicized rate increase sought by Baltimore Gas and Electric in Maryland.

Dr. Axelrod has also been a leading advocate of enterprise risk management (ERM) as a best practice for controlling transactional risks and has been retained by a number of institutions to support the implementation of such programs. His clients have included the NYISO, NYPA and Southern Company.

The following is a list of representative wholesale market assignments.

- For the NYISO, Dr. Axelrod was retained to perform an independent assessment of the ISO's risk profile. Based on his assessment numerous changes were authorized by its Board of Directors and the framework for an ERM process was authorized. The NYISO has subsequently been nationally recognized for its ERM program.

- Dr. Axelrod has also been retained by the NYISO to study other wholesale market issues. For example he analyzed why approximately 50 percent of all wholesale electric transaction were bilateral contracts while the remainder were executed in the NYISO's Day Ahead markets. He was also asked to study the potential effects of electric vehicle

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penetration on wholesale markets including the potential opportunities for vehicle to grid (V2G) applications.

- For the New York Power Authority, Dr. Axelrod led a management review of NYPA's wholesale marketing practices including procurement protocol and risk management procedures.

- Dr Axelrod was again retained by NYPA to assist in the development and implementation of an enterprise-wide risk management program.

- For a range of independent power suppliers, Dr. Axelrod has been retained to support the development of competitive market strategies. Such clients have included: Cogentrix (a subsidiary of Goldman Sachs), Mirant, PSEG Trading, Sempra, and USPG.

- For Roseville Municipal Electric system, Dr. Axelrod performed a "best practice" assessment of its wholesale market practices and procedures including electric and gas portfolio management, power contract management, risk management protocol and counterparty credit and collateral management.

Merger and Acquisition Analysis

Dr. Axelrod has extensive experience in the areas of strategic planning and merger and acquisition analysis. He has supported a number of electric and gas utilities develop strategic and business plans. On several instances he has facilitated senior management strategic retreats. Dr. Axelrod has also performed independent studies assessing the acquisition of electric and gas utilities. For Commonwealth Edison he was instrumental in the company's successful defense of a City of Chicago takeover bid. He also performed acquisition studies of Long Island Lighting Company's gas division, Finger Lakes Gas Company and Savannah Electric. For a major southeast utility, he performed risk analysis of a number of gas acquisition opportunities.

Dr. Axelrod has completed strategic planning, merger and acquisition analysis assignments on behalf of Ameritech, Commonwealth Edison, Brooklyn Union Gas, The Village of Urbana, NY and other confidential utilities.

Market Analysis, Marketing and Competitive Assessment

Dr. Axelrod has performed a wide range of studies in the areas of market analysis, sales forecasting and economic development. He is an experienced strategic planner, marketing facilitator and process analyst. He has supported a number of major utilities develop comprehensive business and marketing strategies focused for both customer retention and expansion. He has also been retained to review and assess planning, forecasting and marketing processes and recommend changes in response to the transition to a competitive energy market. He has helped utilities develop customized marketing programs for key customers accounts, area and economic development, electric and gas technology assessment, gas main extension strategies and natural gas vehicle programs.

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His clients have included Unitil, Ameritech, Super Power, Public Service Electric and Gas, Commonwealth Energy, Brooklyn Union Gas, Orange & Rockland Utilities, Georgia Power, Oglethorpe Power, New York State Electric & Gas, and Western Resources Commonwealth Energy, and Unitil.

Utility Rate-making and Regulatory Policy Analysis

Dr. Axelrod has extensive ratemaking experience having served as a staff member of the New York Public Service Commission and as Director of Utility Intervention for the New York Consumer Protection Board. He has testified in over 75 proceedings and managed over 200 rate cases. As a management consultant for the last 18 years, Dr. Axelrod has supported the development of a range of regulatory strategies for major electric and gas utilities.

Dr. Axelrod has provided expert testimony in areas addressing cost of capital, wages and salaries, labor and total factor productivity, energy and sales forecasts, excess capacity, rate phase-ins, economic impact, nuclear "need for power" prudence, affiliate transactions and promotional rate practices. He has also been lead consultant in rate settlement proceedings before state and federal regulators.

His clients have included Georgia Power, Northeast Utilities, Western Resources (KPL), Brooklyn Union Gas, Boston Edison, Eastern Utilities Associates, Midwest Resources (Iowa Power), Oglethorpe Power, Northern Indiana Public service, Old Dominion and New York State Electric and Gas.

PROFESSIONAL EMPLOYMENT HISTORY

1995 - Present	Energy Strategies, Inc., Founder and President
1994 - 1995	R. J. Rudden Associates, Vice President
1988 - 1994	Resource Management International (now Navigant), Vice President
1984 – 1988	Planmetrics, Vice President, Regulatory Strategy
1981 - 1984	NYS Consumer Protection Board - Director
1980 - 1981	NYS Energy Research and Development Authority - Project Manager
1976 - 1980	NYS Consumer Protection Board - Chief Engineer
1971 - 1976	NYS Public Service Commission - Sr. Research Analysis
1965 – 1971	General Electric Company, Application Engineer

PUBLICATIONS AND PRESENTATIONS

"Comments of Dr. Howard J. Axelrod Energy Strategies, Inc. In Response to Downeast LNG's Revised Purpose and Need Statement Filed August 21, 2009 Accession Number 20090821-5025 (FERC)" prepared on behalf of Three-Nation Alliance (Save Passamaquoddy Bay-U.S., Save Passamaquoddy Bay-Canada, Inc., and Nulankeyutomonen Nkihtahkomikumon) and its individual members / interveners.

"An Assessment of Energy Needs in Westchester County: The Economic Impact of Rising Energy Prices and Shortages in Supplies", Axelrod, H., prepared for the Westchester Business Alliance, January, 2008.

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"An Independent Assessment of the Environmental and Economic Impacts Associated with the Closing of the Vermont Yankee Nuclear Plant", Axelrod, H. prepared for the Vermont Energy Partnership, November 2008.

"The Fallacy of High Prices", Axelrod, H., DeRamus, D, and Cain, C., Public Utility Fortnightly, November, 2006

"Sarbanes-Oxley Implications for Public Power", Northeast Public Power Association Annual Conference, August, 2006

"POLR in Pennsylvania", presentation to the Pennsylvania Energy Associations' Annual Conference, Sept 2000

"Brand Management A Primer on Branding", an EPRI White Paper, December, 1999

"An Assessment of the Market of the Market Potential for Value Added Services" , unpublished, June 1997

"Strategies to Develop a National Customer Base", presented at the 1997 Annual Executive Marketing Conference sponsored by the Institute of Gas Technologies.
"Value-Based Pricing Being Competitive and Profitable", presented at the DA/DSM Annual Conference, January 28 - 29, 1997

"The Role of Peak Shaving in an Open Access Industry", presented at the Institute of Gas Technology conference on Peak-shaving: Issues, Answers & Strategies, June 24-26, 1996

"Financial Implications of a Changing Natural Gas Marketplace," presented at the Institute of Gas Technology conference on Energy Marketing, December, 1995.

"Where Will New Energy Markets Emerge and How Quickly?", presented at the Institute of Gas Technology conference on Natural Gas Marketing, September, 1994

"The DSM-Marketing Linkage," paper presented at the GRI and A.G.A. Workshop on Gas Load Research and Demand Analysis, May, 1994.

"Managing Your Gas IRP," paper presented at the Northeast Gas Market Annual Meeting, June 1993.

"Risk and Uncertainty in Utility Planning," with James Letzelter, Resource, Volume 4, Number 2, Summer, 1992.

"Was Your Winter Cold Enough?" Resource, Volume 4, Number l, Spring 1992.

"Rocky Mountain Pumped Storage Validation Report," prepared for Oglethorpe Power, June 1991.

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"Putting Your Forecasters Back to Work," Resource, Volume 1, Number 1, Spring 1991.

"An Independent Assessment of the Costs, Benefits and Risks Associated with a Municipal Takeover of Commonwealth Edison's Chicago Divisions," prepared for Commonwealth Edison Company, 1988.

"The Economic Impact of Electric Rate Increased Options in Georgia," prepared for Georgia Power November 1986.

"Predicting the Next Regulatory Crisis: An issues Management Approach," appeared as a chapter in a book entitled The Future of Electrical Energy: A Regional Perspective of an Industry in Transition, 1986

"Analysis of Brooklyn Union Gas Company's Proposal to Purchase the Long Island Lighting Company's Gas Operation," prepared for Brooklyn Union Gas Company, July 1985.

"Economic Analysis of Incremental Electric Generation Sizing and Timing," Doctoral Thesis, Rensselaer Polytechnic Institute, May, 1981.
"Factors Influencing Industrial Coal Conversion in New York State," with Dr. Fred Strinisa, paper presented at the Governor's Conference on Expanding the Use of Coal in New York State, May, 1981.

"Utilization of Solid Waste in New York: A State Governor's Positive Action Program," paper presented at the First International Conference on Conversion or Refuse to Energy, Montreux, Switzerland, November, 1975.

"Measuring Electric Utility Productivity," appeared as a chapter in a book entitled, Public Utility, August 1975.

"Prospects of New and Evolving Technologies," with P. Mathusa, D. Stricos, H. Guttman and B. Dwyer, New York Public Service Commission, April 1975.

"Urban Applications of Fuel Cells," with Parker Mathusa, Electric Light and Power, 4/72.

AFFILIATIONS AND HONORS
Life Member, Institute of Electrical and Electronics Engineers
Professional Engineer - Licensed in the State of New York (retired)
Member, Professional Risk Managers International Association

EDUCATION
Rensselaer Polytechnic Institute in Troy, New York, Ph.D., Managerial Economics, 1981
State University of New York in Albany, MBA, Organizational Theory and Marketing, 1976
Union College, Schenectady, NY, Graduate Courses in Industrial Engineering, 1968 - 1970
Northeastern University in Boston, Massachusetts, M.S.E.E., Power Systems, 1971
Northeastern University in Boston, Massachusetts, B.S.E.E., Power Systems, 1970

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